



Bringing Our Youth Back to Technology

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Technology and Our Young

- Call for Action
- How to meet the need





Call for Action –The Facts

- The percentage of women in the IT workforce dropped from 40% in 1986 to 29% in 2000 *(Source: White House Council of Economic Advisors, May 2000)*
- The percentage of women in engineering occupations grew from 6% in 1983 to 10% in 2001. In computer and math professions, the percentage dropped from 31% in 2001 to 26.7 in 2004 *(Source: Department of Labor, October 2004)*
- Some additional statistics from 2000:
 - Girls represented only 17% of the computer science "AP" test takers, and less than one in 10 of the higher level computer science "AB" test takers.
 - Women received less than 28% of the computer science bachelor's degrees, down from a high of 37% in 1984.
 - Women made up just 9% of the recipients of engineering-related bachelors degrees. *(Source: TechSavvy, American Association of University Women Educational Foundation Commission on Technology, Gender, and Teacher Education, 2000)*



The Concern Widens

- As a country, we are losing our edge in math, science, engineering and technology at a rapid rate
- We are losing *both boys and girls* from technological degrees and careers
- Microsoft Corp. Chairman Bill Gates states he feels "deep anxiety" over the ability of the U.S. to compete globally and added that the country is risking its technology leadership because of failures in its education system and immigration policies and inadequate research spending. (Computerworld, March 07, 2007)



Many Youth Programs Exist

- Many programs target high school students; some include junior high
- However, research has shown that jr. high and high school might be too late to really capture and retain the math and technological interests of our youth, male and female.



A successful youth program needs to...

- Capture kids at a very young age
- Be fun
- Be relevant and “cool”
- Promote teamwork and older child-to-younger child mentoring
- Involve social service as rising generations feel deep social obligations



Technology Goddesses

- Founded in 2002 by Cora Carmody
- The purpose of this group is to lead girls along the technological and design paths to design and implement multimedia projects for presentation, web, DVD/video and print; to explore a wide variety of desktop and internet technology
- “Plug in” to Girl Scout programming



The mission of Technology Goddesses is:

- To help girls acquire technology skills in the collaborative fashion they prefer, while helping to spark and sustain their interest through the years.
- To sustain interest and involvement in technology from an early age
- To communicate the societal value of technology
- To imbue a sense of belonging and technical confidence
- To communicate the richness, variety, & fulfillment of IT careers
- To work with IT employers to share the unique needs of women in the workforce



Activities Include

- Workshops, field trips, career discussions, mentoring, service projects and day camp(s)



Field Trips







Career Panels





Service Projects





How we're staffed and funded

- Launched in 2002 with staff of one (me), my own equipment and a partnership with George Mason University
- By 2005, we engaged more external partners and secured a lab of our own. Supporters included:
 - Leslie Biasi of MadCap Software and a Girl Scout leader
 - Lab provided by SAIC, Dell, and Microsoft
- Ongoing: We tap into the established volunteer staffing infrastructure of the Girl Scouts organization and rely on favors and small grants
- Future: Expansion of lab planned for 2007

The Lab!



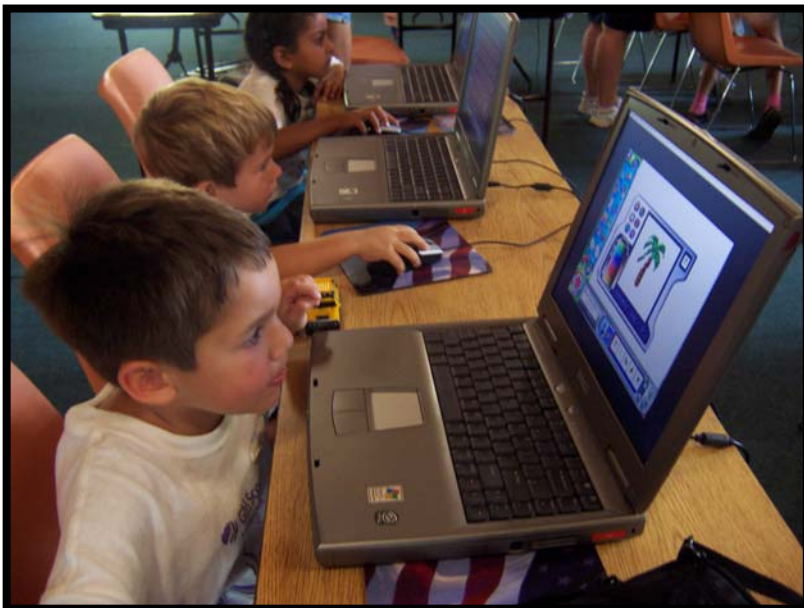
21 laptops
(soon to be 26)
10 digital
cameras
4 laser printers
2 scanners
1 server
Mobile cart
+ Video camera

A canvas portrait produced with lab equipment



Scope Expands

- Lab made day camp possible in 2005
- Lab enabled us to take instruction down to a much younger age and open the camp up to boys and preschoolers (children of volunteers)





Technology That Grabs

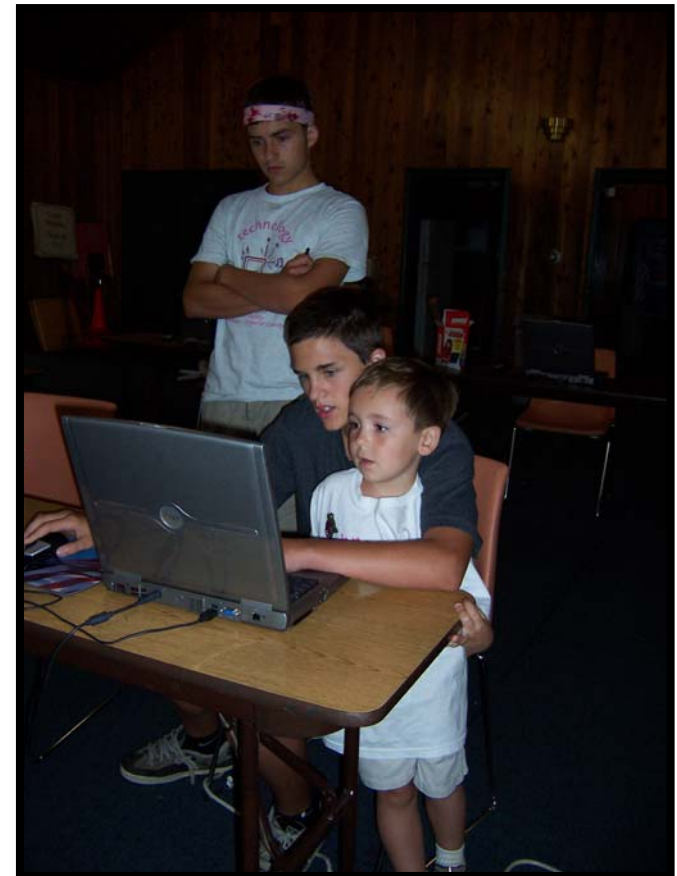
- Microsoft Suite – Powerpoint, Excel, Word, Publisher
- Web Development
- Making Movies
- Graphics
- GPS and Geocaching
- Sponge Bob Typing
- Operating System Tuning and Maintenance!!
- Email (already becoming a dying tool?)





Importance of Mentoring Chain

- Younger children respond better to older children role models (vs. adults)





What Can You Do?

- Reach out to your local Girl Scouts chapter (or other youth organization) to make a connection and define opportunities. Suggested outreach efforts include:
 - **Offer to be interviewed** – highlight the flexibility and compensation potential of IT careers
 - **Provide technology topic workshops** – especially hands on – borrow from existing Technology Goddess workshop materials
 - **Organize Technology Days** - with a number of related local businesses, organizations, and educational institutions. Have booths and mini-sessions set up with diverse technical and scientific topics and exercises.
 - **Offer field trips or job shadowing**
 - **Become a mentor**, someone a child or teen can email with questions and ask for technology-related help and "how-to."
 - **Donate**, where possible, mobile labs and equipment (computers, printers, scanners, phones, etc.)



Summary

- CIOs can help draw future IT workers by getting involved in early education programs with existing youth organizations
- Involvement paints a compelling picture of community involvement that can help attract current IT workers
- A range of support is possible---- sporadic and short-term or time-intensive and long-term
- Both levels of support are needed and both serve to promote IT positions and provide early skills training



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